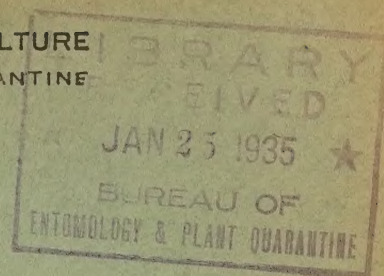


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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
INSECTICIDE DIVISION

Patent List No. 38



A LIST OF
UNITED STATES PATENTS
Issued from 1917 to 1933 inclusive
relating to
APPARATUS FOR WASHING INSECTICIDE RESIDUES
FROM FRUITS AND VEGETABLES
PART III CONVEYING WASHERS

Compiled by

R. C. Roark

Washington, D.C.
November, 1934

A LIST OF UNITED STATES PATENTS ISSUED FROM 1917 TO 1933, INCLUSIVE,
RELATING TO APPARATUS FOR WASHING INSECTICIDE RESIDUES FROM FRUITS AND VEGETABLES

Compiled by

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Insecticide Division, Bureau of Entomology and Plant Quarantine.

The seventy patents included in this list describe apparatus for washing fruit carried on an endless conveyer, for cleaning, scalding or peeling vegetables, for coating citrus fruit with a protective waxy coating, etc.

Every effort has been made by the compiler to make this list of patents complete and no discrimination is intended against any patent mention of which is inadvertently omitted.

The Department of Agriculture assumes no responsibility for the merits or workableness of any of the patents, nor does it recommend any of the inventions listed.

1,215,596 (Feb. 13, 1917; appl. June 24, 1914). FRUIT-WASHER. Ottis B. Wescott, Columbus, Ohio. - Jeffrey Mfg. Co., Columbus, Ohio. - This machine is intended for washing fruit and vegetables, particularly tomatoes, preparatory to canning. The fruit is carried on an endless conveyer through a tank of violently agitated wash water and then under rinsing sprays.

1,237,623 (Aug. 21, 1917; appl. June 25, 1914; original 1,104,175, July 21, 1914; appl. Nov. 29, 1904). PROCESS OF PEELING PEACHES OR OTHER FRUITS OR VEGETABLES. Samuel J. Dunkley, Kalamazoo, Mich. - Dunkley Co., Kalamazoo, Mich. - The skins of the fruit or vegetables, which have been loosened or disintegrated by the action of an alkaline solution or other means, are washed off by jets of water.

1,241,529 (Oct. 2, 1917; appl. Feb. 10, 1915). MACHINE FOR PEELING TOMATOES. John W. Linville and Carl C. Tillman, Toledo, Ohio. - Linville, Tillman & Co., Toledo, Ohio. - This invention provides means whereby tomatoes, after being subjected to the action of a scalding fluid, will be conveyed to skin removing elements, subsequently washed, and then delivered at a point where they can be readily inspected prior to being canned.

1,252,322 (Jan. 1, 1918; appl. Mar. 28, 1917). MACHINE FOR PEELING TOMATOES. Ambrose O. Cooley, Havre De Grace, Md. - A machine which will convey tomatoes, after being cored, to scoring knives which cut the thin skin of each tomato into segments, after which said tomatoes are conveyed to a steaming, washing and brushing apparatus so that the tomatoes are delivered fully peeled, from one end of the apparatus is described.

1,280,879 (Oct. 8, 1918; appl. Mar. 24, 1917). PROCESS AND APPARATUS FOR REMOVING THE SKIN FROM FRUIT. George W. Shannon, Turlock, Calif. - An apparatus for removing the previously disintegrated skin from peaches or other fruit or vegetables and washing the fruit to remove from it the caustic soda solution in which it had been previously immersed is described.

1,290,396 (Jan. 7, 1919; appl. Aug. 9, 1915). BLANCHING-MACHINE. Clarence E. Steere, Chicago, Ill., - Sprague Canning Machinery Co., Chicago, Ill. - This machine for washing and cooking material such as peas which are to be canned comprises a tank through which a rotatable screw conveyer carries the material, said tank being fitted with a water supply pipe and means for heating the water with steam.

1,311,496 (July 29, 1919; appl. Jan. 26, 1918). VEGETABLE WASHER. Joseph J. Castellini, Cincinnati, Ohio - This machine which is adapted to remove dirt from celery, potatoes, turnips and other vegetables utilizes the same wash water in continuous operation, the dirt being removed from the water before it is again used.

1,312,332 (Aug. 5, 1919; appl. Nov. 8, 1918). METHOD AND MACHINE FOR PEELING TOMATOES. Charles Kirino, Ogden, Utah - This machine for peeling tomatoes includes preliminary washing means comprising water sprays.

1,317,898 (Oct. 7, 1919; appl. Oct. 6, 1916). FRUIT-PROCESSING MACHINE. Artemas P. Shepard, Fresno, Calif. - This machine is particularly adapted for the preparation of raisins, prunes and figs for the market, and is designed to provide means for moistening, cleaning, steaming or drying the same to properly process the fruit to render the pulp thereof sufficiently soft and the skin thereof properly cleaned.

1,352,393 (Sept. 7, 1920; appl. Apr. 3, 1920). FRUIT AND VEGETABLE WASHER. Albert R. Thompson, San Jose, Calif. - Anderson-Barn-Grover Mfg. Co., San Jose, Calif. - This machine is particularly intended for the removal of the peel or skin of fruits such as peaches or apricots, after they have been subjected to a lye bath which disintegrates the skin, by repeatedly elevating the fruit from and dropping it into water in a washing tank.

1,384,379 (July 12, 1921; appl. May 21, 1919). PROCESS OF PEELING TOMATOES. William D. Bost and Harry M. Miller, Los Angeles. - Harry M. Miller, Los Angeles, Calif. - The skins of tomatoes which have been previously treated with a suitable alkali or other skin-loosening agent, such as sodium hydroxide, are slashed with knives and flushed off by sheets of hot water in this machine.

1,389,796 (Sept. 6, 1921; appl. July 5, 1921). METHOD OF PEELING FRUIT. Albert R. Thompson, San Jose, Calif. - Anderson-Barn-Grover Mfg. Co., San Jose, Calif. - This process, which is particularly intended for the peeling of pears prior to canning, comprises scalding the fruit in a "tomato-scalder" and subsequently washing off the loosened skin in a washing drum of the type described in U. S. patent 1,352,393 issued Sept. 7, 1920, to A. R. Thompson. The wash liquid is an aqueous saline solution, preferably of sodium chloride, of suitable strength, e. g. 8 percent. This procedure prevents discoloration of the fruit due to oxidation.

1,390,268 (Sept. 13, 1921; appl. Dec. 16, 1920). COMBINED FRUIT WASHER AND SCALDER. William A. Beckett, Kingsville, Ontario, Canada - The object of this invention is to agitate the body of water within the contrivance in such a manner as to cause the individual fruit, e. g. tomatoes, therein to be rolled one against the other thereby producing sufficient surface friction to remove soluble foreign matter attaching to the exterior thereof, such as clay, after which the fruit is passed through a rinsing chamber.

1,581,071 (Apr. 13, 1926; appl. Feb. 23, 1922). TOMATO WASHING, SCALDING AND PEELING MACHINE. Hary W. Lowe, Indianapolis, Ind. - A machine for peeling tomatoes, and, in the preferred form of the invention, for the preliminary washing and scalding of such tomatoes and for treating other fruits and vegetables is described.

1,617,096 (Feb. 8, 1927; appl. June 27, 1925). VEGETABLE-WASHING APPARATUS. John W. Bell and Thomas J. Bell, Lake Monroe, Fla. - Vegetables such as celery, asparagus, carrots, spinach, etc., are carried on a conveyer between tangentially directed sprays of water which penetrate between the leaves and stalks and thoroughly wash away any dirt, insects or spray residues such as arsenic.

1,646,701 (Oct. 25, 1927; appl. Dec. 1, 1924). CLEANING MACHINE FOR FRUIT, VEGETABLES, OR THE LIKE. Andrew O. Moe, Toppenish, Wash. - This invention has relation to machines for the cleaning, sorting and sacking of potatoes or other analogous vegetables and fruits, being in the nature of an improvement over a similar device set forth in U. S. patent 1,357,794, granted to A. O. Moe on Nov. 2, 1920.

1,655,871 (Jan. 10, 1928; appl. Oct. 25, 1926). FRUIT-TREATING MACHINE. Charles E. Lum, Yakima, Wash. - This machine consists of one or more series of piping that have communication with water, cold or hot air, a chemical solution, etc., etc., under great pressure whereby the fruit may be thoroughly washed, chemically treated, thoroughly dried, or otherwise acted upon.

1,396,268 (Nov. 8, 1921; appl. Nov. 13, 1916; renewed Jan. 8, 1921). APPARATUS AND PROCESS FOR PEELING FRUIT AND VEGETABLES.. Samuel J. Dunkley, Oakland, Calif. - Dunkley Co., Kalamazoo, Mich. - Fruits or vegetables, particularly peaches, are treated with lye to disintegrate the skins, subjected to water sprays to remove the skins, and blanched with steam, water or both.

1,402,490 (Jan. 3, 1922; appl. June 6, 1919). FRUIT WASHER. George Glass, Milwaukee, Wis. - Sprague Canning Machinery Co., Chicago, Ill. - Fruit or vegetables pass through an inclined, reciprocally moving trough in the bottom of which are holes through which broken or injured fruit and skins fall. A cleaning liquid is sprayed over the fruit from above.

1,427,270 (Aug. 29, 1922; appl. Jan. 28, 1919; renewed Feb. 6, 1922). PEELING APPARATUS AND PROCESS. Samuel J. Dunkley, Kalamazoo, Mich. - Dunkley Co., Kalamazoo, Mich. - Fruit such as peaches or apricots, or vegetables such as sweet potatoes, are sprayed with lye to disintegrate the skins, then subjected to strong jets of water to remove the skins and washed; and finally blanched with hot water or steam preparatory to canning.

1,428,125 (Sept. 5, 1922; appl. Apr. 10, 1922). VEGETABLE-WASHING MACHINE. Wade L. Street, Chicago, Ill. - T. A. Snider Preserve Co., Chicago, Ill. - This invention relates to vegetable washing machines of that type which employs a perforated water spray pipe, and its principal object is to provide means for cleaning the spray pipe and freeing it from foreign substances, both outside and inside of it.

1,438,467 (Dec. 12, 1922; appl. Nov. 21, 1921). METHOD OF SEPARATING SKINS FROM VEGETABLES AND FRUITS. Cecil J. Walden, Los Angeles, Calif. - Peppers, chilis, pimientos and similar vegetables are immersed in a bath of neutral, tasteless oil, e. g. cotton seed or olive oil, at a temperature above the boiling point, until the skins are thoroughly blistered. The loosened skins are then removed by a spray of cold water combined with a rubbing action.

1,445,276 (Feb. 13, 1923; appl. Jan. 15, 1921). BLANCHER.. Oswald H. Hansen, Fort Washington, Wis. - Hansen Canning Machinery Corp., Wis. - This device for washing and heating green peas or other vegetables and fruits prior to canning comprises a drum containing a helical series of elevating vanes, the whole rotating in a casing provided with means for admitting, discharging and heating liquid. Means are also provided for adding and removing peas during operation.

1,452,844 (Apr. 24, 1923; appl. July 29, 1922). BERRY AND FRUIT WASHING MACHINE. John S. Ogburn, Lindale, Tex. - Berries or other fruit are agitated in a tank of water or other liquid and carried out on a conveyer of screen belting. Gates of wire mesh prevent leaves and dirt from passing out with the fruit.

1,456,456 (May 22, 1923; appl. Dec. 21, 1922). FRUIT-WASHING MACHINE. Lauritz N. Miller, Eugene, Ore. - This apparatus provides a machine for washing prunes and discharging the same onto trays for drying, comprehending means for receiving and agitating the prunes in process of being washed whereby to remove any foreign matter therefrom, the washed prunes being conveyed to a further cleaning bath and then delivered onto drying trays.

1,457,284 (May 29, 1923; appl. Feb. 7, 1923). WASHER FOR VEGETABLES, ETC. Ogden S. Sells, Buffalo, N. Y. - Tomatoes or other fruit or vegetables pass through a rotary reel where they are sprayed with water to remove dirt and debris.

1,466,798 (Sept. 4, 1923; appl. Dec. 5, 1921; renewed July 9, 1923). APPARATUS FOR AND METHOD OF PEELING VEGETABLES OR FRUITS. Harry M. Miller, Los Angeles, Calif. - National Peeling Machine Co., Los Angeles, Calif. - Tomatoes or fruits to be peeled are first treated with an alkali to loosen the skins, then the tomatoes are moved through a relatively fine spray or shower of water to wash them substantially free from the alkali, and then the tomatoes are moved through sheets of water falling a comparatively short distance from a tank containing a thin sheet thereof.

1,466,799 (Sept. 4, 1923; appl. Apr. 10, 1922; renewed July 9, 1923). PEELING MACHINE. Harry M. Miller, South Pasadena, Calif. - National Peeling Machine Co., Los Angeles, Calif. - A machine for peeling fruits and vegetables effects the operation of producing openings in the skins and causing water to enter the openings to wash the skins from the pulp bodies.

1,468,873 (Sept. 25, 1923; appl. Aug. 20, 1919; renewed July 9, 1923). APPARATUS FOR PEELING FRUITS AND VEGETABLES. William D. Bost, Los Angeles, Harry M. Miller, South Pasadena, and George W. Garwood, El Monte, Calif. - National Peeling Machine Co., Los Angeles, Calif. - An apparatus by which the skins of fruits and vegetables are punctured or perforated and the skins after being perforated are flushed off of the pulp bodies is described.

1,492,132 (Apr. 29, 1924; appl. Mar. 16, 1922). FRUIT BLANCHER. Fred J. Kaster and Marion M. Long, Portland, Ore. - Apples or other fruit which have been peeled and immersed in a chemical solution such as sodium chloride, sulphite of soda or alum, to prevent discoloration, are carried by an endless conveyer through a trough of hot water where they are blanched and the chemical washed off.

1,494,027 (May 13, 1924; appl. Apr. 10, 1923). VEGETABLE-WASHING MACHINE. Charles A. Schettler, Mansfield, Ohio - This device is an improvement on that described in U. S. patent 1,210,853 issued Jan. 2, 1917 to C. A. Schettler.

1,561,043 (Nov. 10, 1925; appl. Oct. 8, 1924). POTATO CLEANER AND STERILIZER. Roscoe C. Zuckerman, Stockton, Calif. - Potatoes are dumped

through a conduit, containing reciprocally acting scrubbing brushes and filled with water, into a connecting tank through which water flows under pressure. Endless conveyers carry them into a second tank containing a sterilization agent which will kill the fungus on the potatoes but will not affect the food qualities, and thence to a slide where they are dried by an air blast.

1,667,132 (Apr. 24, 1928; appl. Apr. 11, 1927). HANDLING FRUIT. Paul A. Scherer, Medford, Ore. - Fruit is placed in a liquid stream which carries it along to a conveyer which may carry it into another liquid. The liquids may be acid for removing spray residues, disinfectants, such as formaldehyde (1 gal. to 100 gals. water) to prevent blue mold, brown rot, perennial canker, anthracnose or other fungus, water or any other liquid desired.

1,673,174 (June 12, 1928; appl. June 26, 1925). METHOD OF GRADING MATERIALS. William G. Allen, Salem, Ore. - Fruit is carried by a stream of water onto a vibrating grading surface which is composed of suitably spaced parallel bars. The water passes through and leaves such fruit as is of greater diameter than the space between the bars. The fruit is thus simultaneously graded and cleaned.

1,673,175 (June 12, 1928; appl. June 26, 1925). SYSTEM OF GRADING MATERIALS. William G. Allen, Salem, Ore. - Fruit is carried by a stream of water through grading operations, thus effecting simultaneous cleaning.

1,691,727 (Nov. 13, 1928; appl. Mar. 22, 1927). FRUIT-CLEANING MACHINE. John R. Litty and Trued B. Lundin, Philadelphia, Pa. - A machine for cleaning raisins, currants and the like comprises a drum in which water and the fruit are placed and in which rotates a shaft to which are secured brushes and beaters.

1,694,675 (Dec. 11, 1928; appl. Oct. 23, 1926). FRUIT-CLEANING MECHANISM. Edward A. White, Lewiston, Idaho - This invention employs cleaning members in the form of rollers which are rotated in the same direction whereby the interposed fruit will have imparted to it a rubbing action by one roller in one direction and a like rubbing action by the companion roller in another direction.

1,694,734 (Dec. 11, 1928; appl. Jan. 25, 1927). SPRAY WASHER. Frank W. Cutler, Portland, Ore. - Fruit, e. g. pears or apples, carried on a cross roll conveyer is subjected to washing sprays directed longitudinally and transversely to the rolls.

1,705,959 (Mar. 19, 1929; appl. Mar. 23, 1925). MACHINE FOR WASHING FRUIT, ETC. Jonas J. Byberg, Silverton, Ore. - Prunes or other fruit pass from a hopper down an incline, where they are sprayed with hot water, after which they are sprayed with cold water and then pass onto trays.

1,706,577 (Mar. 26, 1929; appl. July 8, 1926). FRUIT CLEANING AND POLISHING MACHINE. Lars H. Larsen, Zillah, Wash. - A machine employing wipers for cleaning and polishing fruit such as apples and pears is described.

1,707,610 (Apr. 2, 1929; appl. Mar. 2, 1927). APPARATUS FOR TREATMENT OF DECIDUOUS FRUIT. August Guignard, August Bosse, and John Guignard, Hood River, Ore. - Fruit carried on an endless conveyer is subjected to sprays of acid solution, e. g. 1 percent hydrochloric acid, for about 20 seconds to neutralize the residue of lead arsenate or other poisonous spray compound or insecticides; then to sprays of water, and finally to the drying action of revolving brushes and a current of warm air.

1,708,364 (Apr. 9, 1929; appl. June 1, 1927). MACHINE FOR STERILIZING AND WASHING FRUIT. August Guignard, Hood River, Ore. - This machine comprises endless conveyers moving through a vat containing treating or washing liquid which is kept in circulation by propellers placed on vertical shafts. Deflectors direct the circulating liquid over the fruit on the conveyers.

1,716,712 (June 11, 1929; appl. Feb. 27, 1928). WASHING MACHINE FOR VEGETABLES, FRUITS AND THE LIKE. Rudolph J. Stepich, Stockton, Calif. - Fruit is washed and insects removed from it by carrying it on an endless conveyer under a series of high pressure water or other liquid jets.

1,717,647 (June 18, 1929; appl. Aug. 18, 1925). PROCESS FOR PEELING PEACHES. Moses Barody, Albany, N. Y. - One-half to Charles H. Andros, Nassau, N.Y. - A process of peeling peaches comprises cooling the peaches to a point slightly above thirty-two degrees Fahrenheit, immersing in a boiling solution of caustic soda to loosen and partially disintegrate the skins, and thereafter washing the peaches.

1,718,056 (June 18, 1929; appl. Oct. 12, 1927). FRUIT-CLEANING MACHINE. James F. McGhee, Moorestown, N. J. - American Machinery Corp., Philadelphia, Pa. - The object of this invention is to provide a novel, simple and efficient machine for breaking or separating and washing figs and similar fruit which is usually received in a closely packed and caked condition requiring the caked mass to be broken and the figs or other fruit thereof to be separated and washed before use.

1,723,441 (Aug. 6, 1929; appl. June 20, 1927). MACHINE FOR CLEANING FRUIT. John H. Richards, Yakima, Wash. - This invention relates to machinery for use in the washing of fruit, vegetables, eggs or any other commodity of that nature which requires cleaning before being placed on the market, wherein the articles are first passed through a chemical treating action and then a washing action, and finally a brushing and drying action, so that the articles may be shipped in proper and marketable condition.

1,732,180 (Oct. 15, 1929; appl. Dec. 15, 1924; divided and this application filed Feb. 23, 1926). APPARATUS FOR PREPARING FRESH FRUIT FOR MARKET. Ernest M. Brogden, Santa Monica, Calif. - Brogdex Co., Winter Haven, Fla. - A machine for cleaning citrus or other fruits, treating them with a decay-inhibiting agent such as borax solution, drying them and, if desired, applying a protective waxy coating is described.

1,732,552 (Oct. 22, 1929; appl. Oct. 25, 1926). BLANCHER. Frank D. Chapman, Berlin, Wis. - Berlin Chapman Co., Berlin, Wis. - This device for cleaning and cooking fruit or vegetables prior to canning comprises a rotatable, foraminous drum mounted in an outer receptacle, said drum being provided with means for continuously supplying hot water and with means for moving the fruit or vegetables through it.

1,736,813 (Nov. 26, 1929; appl. Feb. 10, 1926). POTATO CLEANER. Roscoe C. Zuckerman, Stockton, Calif. - A device for mechanically removing any dirt caked on potatoes and at the same time causing the potatoes to be washed and also for causing any floatable foreign matter with the potatoes to be separated from the same while they are undergoing the cleaning operation is described. This is an improvement over the structure shown in U. S. patent 1,561,043 issued Nov. 10, 1925 to R. C. Zuckerman.

1,748,019 (Feb. 18, 1930; appl. May 17, 1927). MACHINE FOR STERILIZING, WASHING, AND DRYING FRUIT. August Guignard, Hood River, Ore. - This apparatus comprises tanks designed to hold solutions for the treatment of apples and pears or other farm products, conveyers being provided to carry the fruit through the tanks, and a drying machine for the fruit. The solutions used are: dilute acid solutions to remove spray residues, e. g. lead arsenate, adhering to the fruit; sterilizing solutions, e. g. aqueous formaldehyde solution, to destroy bacteria or other microorganism on the fruit; and water to remove any of these solutions remaining on the fruit.

1,750,612 (Mar. 11, 1930; appl. Jan. 16, 1929). VEGETABLE WASHER. Charles L. Dallinga, Akron, Ohio - A washer such as may be used for washing celery and green vegetables, root vegetables, fruits, etc., provides means for spraying the produce with water while being tumbled or rotated, and means for removing the produce from the washer after a predetermined period of washing to avoid injuring the same.

1,751,838 (Mar. 25, 1930; appl. Aug. 19, 1925). APPARATUS FOR PREPARING CANE STALKS. William H. Morgan, Sr., Alliance, Ohio - Morgan Hurrycane Co., New York, N. Y. - Apparatus for washing or otherwise cleaning sugar cane stalks to remove all juice-contaminating matter therefrom and for separating the leaves and trash from the stalks is described.

1,758,064 (May 13, 1930; appl. Mar. 10, 1926). APPARATUS FOR TREATING FOOD MATERIALS. John Schmidt, Hoopeston, Ill. - Sprague-Sells Corp., Hoopeston, Ill. - A machine for cleaning and scalding green peas, lima beans, kidney and navy beans, string beans, beets and like vegetables is described.

1,765,647 (June 24, 1930; appl. Feb. 23, 1929). ROTARY CONVEYER AND WASHER FOR VEGETABLES AND FRUITS. Ulrich J. Boehnke, San Juan, Tex. - This invention provides a rotary structure for conveying fruit or vegetables to be washed through a spray and then to a position whereby they may be taken from the conveyer without injury and placed in the shipping boxes, crates, baskets or the like.

1,786,405 (Dec. 23, 1930; appl. July 23, 1923; divided and appl. May 19, 1928). APPARATUS FOR TREATING FRUIT AND THE LIKE. Ernest M. Brogden, Pomona, Calif. - Brogdex Co., Los Angeles, Calif. - This apparatus comprises a brush roll machine for cleaning fruits and vegetables including means for applying a waxy protective coating to the fruit. This waxy material is applied in the form of an emulsion-like mixture comprising principally paraffin, an oily vehicle and water.

1,796,856 (Mar. 17, 1931; appl. Mar. 31, 1928; in Great Britain Feb. 15, 1928). METHOD AND MEANS FOR WASHING COFFEE BEANS. Max Aya, London, England. - Coffee beans or other beans, berries, seeds, grain or the like are washed in this device by counterflow action of water.

1,806,957 (May 26, 1931; appl. Aug. 3, 1928). APPARATUS FOR WASHING VEGETABLES AND FRUITS. George E. Stocking, Rochelle, Wis. - One-fourth to Berlin Chapman Co., Berlin, Wis. - A machine for washing fruit and vegetables, particularly asparagus, comprises a rotatable, foraminous drum mounted in an outer, water-holding receptacle, the drum being provided with spiral means for moving the asparagus through it.

1,824,814 (Sept. 29, 1931; appl. Sept. 10, 1928). FRUIT WASHING MACHINE. George F. Frine, Sodus, N.Y. - This invention provides a fruit washing machine which includes a tank in which the fruit to be washed is initially placed, a rotatable drum being arranged for movement within the tank and having associated therewith a screened peripheral portion, on which is arranged in a transverse manner a series of annular spaced perforated buckets whereby the fruit is elevated from the tank, the water being drained from the fruit during the elevation of the same upwardly out of the tank, a discharge chute being arranged for association with the rotatable drum to convey the washed fruit into a suitable container or receptacle.

1,827,068 (Oct. 13, 1931; appl. Oct. 10, 1928). ELEVATOR. Mead S. Carmichael, Sparta, Wis. - This invention relates to the combination with an instrumentality for elevating fruit and vegetables, e. g. peas, of a means for washing or cleaning such materials.

1,830,180 (Nov. 3, 1931; appl. Mar. 5, 1928). FRUIT TREATING APPARATUS. Clarence P. Wilson, Ontario, and Robert D. Nedvidek, Pomona, Calif.- California Fruit Growers Exchange, Los Angeles, Calif. - An object of this invention is to provide a method of and apparatus for applying a liquid treatment to fruit (e.g. oranges) in which a treating liquid may be kept in use for a relatively long period before its renewal is required. The fruit is treated with a strong soap solution for cleaning, rinsed with water, treated with a decay-retarding liquid, e.g. solutions of borax or sodium bicarbonate, rinsed again and dried.

1,852,405 (Apr. 5, 1932; appl. May 20, 1929). FRUIT WASHER AND DRIER. Treffle Farley, Yakima, Wash. - One-half to William McGonagle, Yakima, Wash. - An apparatus to wash and dry fruit, particularly apples, so as to prepare same for marketing is described.

1,854,433 (Apr. 19, 1932; appl. June 2, 1930). FRUIT WASHER. Joy M. Warner, Santa Paula, Calif. - A device in which fruit, e. g. lemons, is treated by a rotary element and is conveyed to or from such element by a current of liquid is described.

1,873,832 (Aug. 23, 1932; appl. Nov. 14, 1930). FRUIT CLEANING APPARATUS. Treffle Farley, Selah, Wash. - One-half to William McGonagle, Yakima, Wash. - An apparatus for washing fruit, particularly apples for market is described. It is an improvement over that described in U. S. patent 1,748,872 issued Feb. 25, 1930 to T. Farley.

1,877,816 (Sept. 20, 1932; appl. June 17, 1929). LIQUID BATH APPARATUS. Charles B. Cook, Los Angeles, Calif. - This invention provides a method of preparing fruit for market wherein liquid such as water or borax solution is forced into the pores of the fruit.

1,901,455 (Mar. 14, 1933; appl. Nov. 27, 1928). APPARATUS FOR WASHING FRUITS. Ridgway R. Kennedy, Philadelphia, Pa. - Abbotts Dairies, Inc., Philadelphia, Pa. - This invention provides a method of and apparatus for washing and cleaning fruits, and more particularly berries, by immersion thereof in a plurality of separate shallow streams of cleaning fluid during the flow of the fruit through a flume.

1,916,269 (July 4, 1933; appl. June 6, 1928). APPARATUS FOR TREATING AND PEELING FRUITS. William A. Kingsbury, Hayward, Calif. - Sprague-Sells Corp., Hoopeston, Ill. - Fruits and vegetables are treated with live steam to warm and wet them, then passes through falling films of lye solution to disintegrate the skins, and subjected to cold water jets to remove the skins and wash off excess lye, and finally, blanched with steam.

1,923,722 (Aug. 22, 1933; appl. Apr. 1, 1929). FRUIT CLEANING MACHINE. George E. Goodwin, Hood River, Ore. - This invention pertains to a fruit cleaning machine of the surge tank, float and duct return type of liquid washer and rinser and is designed to wash and rinse apples, pears, peaches, oranges, lemons, or other similar types, and forms of fruit where such cleaning may be necessary on account of the removal of spray, dust, or other foreign matter from the surface of such fruit; or for the purpose of giving such fruit a liquid sanitary, disinfectant or prophylactic treatment.

1,931,463 (Oct. 17, 1933; appl. Dec. 15, 1924; divided and this appl. Oct. 29, 1932). APPARATUS FOR TREATING FRESH FRUIT IN PREPARATION FOR MARKET. Ernest M. Brogden, Pomona, Calif. - Brogdex Co., Winter Haven, Fla. - This invention relates to apparatus suitable for applying to fresh fruit, such as oranges or the like, a solution of a treating reagent, e. g. borax, for inhibiting blue mold, and then subjecting the treated fruit to a rinse with plain water to remove unnecessary excess of the treating reagent.

1,931,565 (Oct. 24, 1933; appl. May 15, 1929). FRUIT TREATING MECHANISM. Edward A. White, Lewiston, Idaho - It is a feature of the invention to remove poison spray sediment from fruit, e. g. apples, although it is also adapted for use in removing soil from potatoes, topped beets or the like.

1,932,827 (Oct. 31, 1933; appl. June 25, 1928). APPARATUS FOR PREPARING FRESH FRUIT FOR MARKET. Douglas C. Morris and Leonard O. Cockrill, Yakima, Wash. - Brogdex Co., Winter Haven, Fla. - A principal object of the present invention is to provide apparatus for removing foreign matter from fruit in general and more particularly for removing poisonous spray residues, e. g. lead arsenate, from apples, pears and the like.

ASSIGNEE INDEX
(Numbers refer to patents cited)

Abbotts Dairies, Inc., 1,901,455
American Machinery Corp., 1,718,056
Anderson-Barn-Grover Mfg. Co., 1,352,393; 1,389,796
Andros, Charles H., 1,717,647
Berlin Chapman Co., 1,732,552; 1,806,957
Brogdex Co., 1,732,180; 1,786,405; 1,931,463; 1,932,827
California Fruit Growers Exchange, 1,830,180
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Jeffrey Mfg. Co., 1,215,596
Linville, Tillman & Co., 1,241,529
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Miller, Harry M., 1,384,379
Morgan Hurrycane Co., 1,751,838
National Peeling Machine Co., 1,466,798; 1,466,799; 1,468,873
Snider, T. A., Preserve Co., 1,428,125
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